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BY HAND

William F. Caton, Acting Secretary  
Federal Communications Commission  
1919 M Street, N.W., Room 222  
Washington, D.C. 20554

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JAN 26 1995  
FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

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Re: Oral and Written Ex Parte Presentations; ET Docket No. 94-32

Dear Mr. Caton:

On Thursday, January 26, 1994, Ronald L. Mahany of Norand Corporation and Marc Berejka and I met with Ruth Milkman, Senior Legal Advisor to Chairman Hundt, to discuss Norand's position in the above-referenced proceeding. The information presented and discussed during the meeting is contained in Norand's Comments and in the attached document which was distributed at the meeting. In accordance with § 1.1206(a) of the Commission's rules, two copies of this material are being submitted for inclusion in the public record. Please contact me if you have any questions.

Sincerely,

*Stephen R. Bell*  
Stephen R. Bell

Enclosure

cc: Ruth Milkman

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**Allocation of Federal Spectrum Below 5 GHz**

**ET Docket No. 94-32**

**Presented by:**

**Norand Corporation**

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## Norand Overview

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- 25 years old, approximately \$193 million annual sales
- Pioneer in mobile computing, 10th year producing RF products
- R&D expenditures equal more than 10% of overall sales revenues
- Produces hand-held and industrial-mobile computer products
- 50% of products incorporate interactive RF data communications capabilities
- Offer Part 90 (450 MHz) and Part 15 spread spectrum product lines
- Nearly 20% of revenues from exports in FY '93

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## Part 15 Industry

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- Norand was the pioneer
- Recently joined by AT&T, IBM, Motorola, Apple
- Product line includes cordless phone, wireless LAN
- Wireless LAN market to grow from \$70 million in 1993 to \$1.7 billion in 2000
- Part 15 spread spectrum device most efficient technology for wireless LAN
- Export oriented

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## **Current Allocation for Part 15 Spread Spectrum Devices**

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- 902-928 MHz - subject to AVM proceeding, ET Docket No. 93-61
- 2400-2483.5 MHz - upper portion dominated by microwave ovens
- 5725-5850 MHz - not currently useable

## **Proposed Reallocation of 2402-2417**

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- Generic non-federal allocations licensed by auction

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## **Reallocation Seriously Impacts Part 15 Technology**

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- Limits usefulness of existing products
  - ▶ Millions of devices
- Destroys value of R&D
  - ▶ Hundreds of millions of dollars
- Restricts the capabilities of future Part 15 products
- Severely limits export market

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## No Party Has Presented A Plausible Proposal for Licensed Uses

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- 40 parties oppose licensed use
  - ▶ Motorola, AT&T
- Only 6 support licensed use
  - ▶ Wireless loop apparently more appropriate in 2.3 GHz
  - ▶ MMDS, MSS and public safety fail to address interference from ISM and Part 15 use and interference to Part 15
- Original supporters of licensed use (APCO, API) have abandoned support

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## **Reallocation Is Inconsistent with Public Interest**

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- Commission encouraged development of Part 15 at 2402 to 2417 MHz
- Commission recognized reallocation would jeopardize investment in Part 15

"Any future changes to this band could jeopardize significant private sector investment already made in this band and could result in a loss of benefits to the public and the Federal Government."<sup>1</sup>

<sup>1</sup> FCC Report to Ronald H. Brown, Secretary, U.S. Department of Commerce, Regarding the Preliminary Spectrum Reallocation Report, FCC 94-213, Released August 9, 1994, at § 51.



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## Reallocation Is Inconsistent with Public Interest (continued)

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- "Critical importance of [unlicensed Part 15] wireless systems to the future development of the National Information Infrastructure (NII) is well recognized and supported."<sup>2</sup>
- Auctions should not, and arguably cannot, be used to allocate spectrum

<sup>2</sup> A letter from NTIA Administrator Larry Irving to Chairman Hundt, dated December 12, 1994.